Air Force SBIR **Impact**

Solid-state Data Storage System Replaces Tape System

Company:
Systems & Processes Engineering Corporation

Location:
Austin, Texas

Employees:
80

President:
Randy Noster

Project Officer:
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AFRL Sensors Directorate
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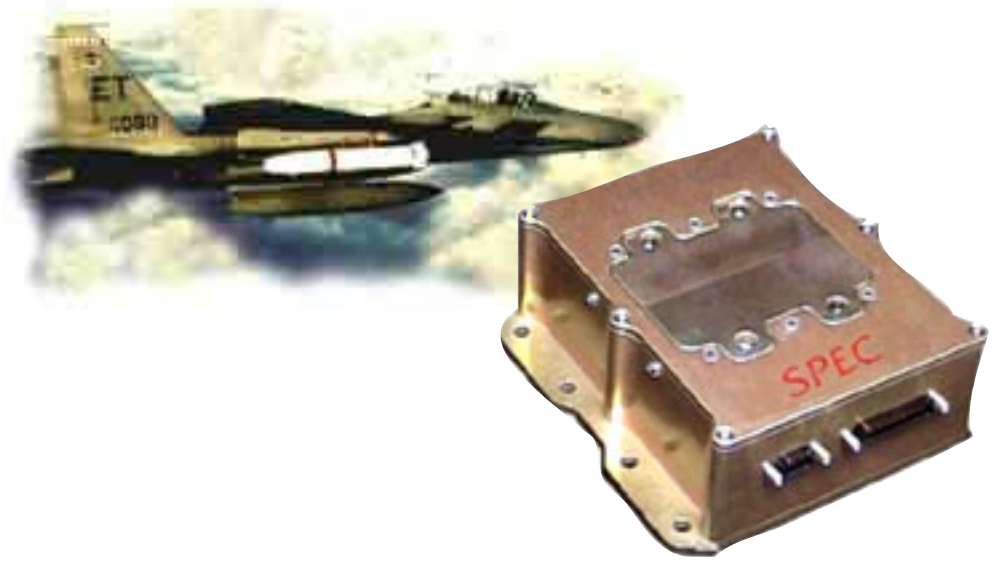

Air Force Requirements:

The Air Force is constantly upgrading its data storage systems for simultaneous support of management systems, reconnaissance and surveillance systems, communications systems, and instrumentation systems. Speed, cost effectiveness, flexibility, expanded memory, and logistic cost over the life cycle are the main features the Air Force looks for in new systems.

SBIR Technology:

Under a SBIR Phase II sponsored by Air Force Research Laboratory Sensors Directorate at Wright Patterson AFB and Eglin AFB, and the DoD Central Test and Evaluation Investment Program, Systems Processes Engineering Corp (SPEC) developed the TornadoHD™, a solid-state data storage system to replace tape systems.

The TornadoHD™ accommodates data rates in excess of 6 Gbits/sec and its compact design reduces size, weight and power requirements. It has memory capacities from 13.8 GBytes to 220 GBytes per Removable Memory Unit (RMU) and accommodates up to 16 RMUs (3.6 TBytes capacity). It is easily adaptable to a variety of input interfaces to accommodate future sensor upgrades and adapts easily from solid state to other mass storage media. Its solid-state reliability increases tolerance to shock, vibration, and temperature, thus a reducing life cycle cost.

For more information on this story, contact Air Force TechConnect at 1-800-203-6451 or at www.afrl.af.mil/techconn/index.htm

In May 2001, this storage system was part of an external pylon pod instrumentation package flown on an F-15 by the 46th Test Wing at Eglin AFB, Florida. This test lasted approximately two hours and the storage system successfully captured, stored, and replayed the data. This series of tests demonstrates that this storage system is flight-worthy to support other critical missions.

Company Impact:

On the ground and in commercial applications, the TornadoHD™ is positioned to become an integral part of all wide band storage area networks, and is applicable to those networks and computer platforms, which are engaged in the real-time manipulation of very large files. Specifically, it has capabilities to support interactive communications, processing, analysis, and production of high- resolution video.

A customized second generation TornadoHD™ capable of capturing critical data and allowing faster post-flight data reconstruction and analysis was delivered to Raytheon in 2001, with follow on orders for delivery in 2002.

Company Quote:

"SPEC has designed a solid state data storage system that is the high-end of our embedded systems product line. In demanding airborne and military environments, this is the ideal onboard data storage system for simultaneous support of management systems, reconnaissance and surveillance systems, communications systems, and instrumentation systems."

Randolph E. Noster
President and CEO
Systems & Processes Engineering Corporation

SBIR

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